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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte STEPHEN T. DYBING

Appeal 2010-011925
Application 10/646,852
Technology Center 1700

Before DONALD E. ADAMS, ERIC GRIMES, and
FRANCISCO C. PRATS, Administrative Patent Judges.

ADAMS, Administrative Patent Judge.

DECISION ON APPEAL

This appeal under 35 U.S.C. § 134 involves claims 2-8, 10-13, 16-22, 27, and 33-45, the only claims pending in this application. We have jurisdiction under 35 U.S.C. § 6(b).

STATEMENT OF THE CASE

The claims are directed to a method of making cheese (claims 33-37 and 43-45) and a method of producing a food product from a concentrated protein (claims 2-8, 10-13, 16-22, 27, and 38-42). Claims 33 and 38 are representative and are reproduced in the "Claims Appendix" of Appellant's Brief (App. Br. 21).

Claims 2-8, 10-13, 16-22, and 38-42 stand rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103 as obvious over Carr.[1]

Claims 27, 33-37, and 43-45 stand rejected under 35 U.S.C § 103(a) as unpatentable over the combination of Carr and Sadowsky.[2]

We reverse.

The rejection over Carr alone:

ISSUE

Does the preponderance of evidence on this record show that an increase in the emulsion capacity and stability of a milk protein concentrate would be an inherent or obvious property of Carr's milk protein concentrate?

FACTUAL FINDINGS

FF 1. Carr teaches "a dried enhanced-solubility milk protein concentrate (MPC) containing at least one monovalent salt added prior to drying" (Carr, Abstract).

FF 2. The Examiner finds that Carr teaches the addition of "0.013-0.30 moles of cation . . . per 100g protein" (Ans. 3).

FF 3. Carr teaches that the "at least one monovalent salt [is added] in an amount that confers enhanced solubility on the product when dried" (Carr, Abstract; Ans. 3).

FF 4. Carr defines the term "enhanced-solubility" as "the property of a product which on reconstitution into a 5% w/v solution provides less

[1] Carr, WO 02/096208 A2, published December 5, 2002.
[2] Sadowsky, IV et al., US 6,358,551 B1, issued March 19, 2002.

sediment on centrifugation for 10 minutes at 700g relative to the corresponding product without salt treatment" (Carr 2: 33-35).

FF 5. The Examiner finds Carr fails to teach "increased emulsion capacity and stability" (Ans. 4).

FF 6. Carr teaches the use of MPC in the manufacture of cheese (Carr, Abstract; Ans. 3-4).

PRINCIPLES OF LAW

"Under the principles of inherency, if the prior art necessarily functions in accordance with, or includes, the claimed limitations, it anticipates." In re Cruciferous Sprout Litig., 301 F.3d 1343, 1349 (Fed. Cir. 2002) (citations and internal quotation marks omitted). "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." In re Robertson, 169 F.3d 743, 745 (Fed. Cir. 1999) (citations and internal quotation marks omitted).

ANALYSIS

Appellant's claimed invention requires, inter alia, that the ionic composition of a hydrated protein solution be adjusted "to enhance its ability to emulsify fat in water as measured by at least one of increased emulsion capacity (EC) and increased emulsion stability (ES) in comparison to untreated protein" (Claim 38).

Carr teaches the addition of salt to a hydrated protein solution (i.e., milk protein concentrate) (FF 1-2). There is, however, no showing that the amount of salt utilized by Carr is, or would reasonably have been expected to be, the same amount of salt required to achieve Appellant's claimed objective of enhancing a hydrated protein solution's ability to emulsify fat in

water (Cf. FF 2 and Appellant's claim 38; see also App. Br. 8-9 and Reply Br. 7).

We are not persuaded by the Examiner's unsupported assertion that "[a]ny improvement in [the] solubility [of a protein concentrate] would increase the ability to emulsify" (Ans. 6). Instead, we agree with Appellant's contention that "[t]he Examiner has failed to provide any facts or technical reasoning to support . . . [a] finding of inherency" (App. Br. 9).

As Appellant explains, "[w]hen relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art" (App. Br. 8-9; Reply Br. 6). We agree. See In re Cruciferous Sprout Litig., 301 F.3d at 1349 and In re Robertson, 169 F.3d at 745.

With regard to the alternative basis of the rejection in § 103, the Examiner has not provided a reasoned explanation of why an increase in emulsion capacity or stability would have been obvious based on Carr.

CONCLUSION OF LAW

The preponderance of evidence on this record fails to show that an increase in the emulsion capacity and stability of a milk protein concentrate would be an inherent or obvious property of Carr's milk protein concentrate. The rejection of claims 2-8, 10-13, 16-22, and 38-42 under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103 as obvious over Carr is reversed.

The rejection over the combination of Carr and Sadowsky:

Initially, we note that while the Examiner did not reject independent claim 38 over the combination of Carr and Sadowsky, the Examiner did reject claim 27, which depends from claim 38 over this combination of references. The remaining claims in this ground of rejection include independent claim 33 and claims that depend from claim 33. Accordingly, the obviousness rejection presents the following two issues for our review:

ISSUE 1

In the context of claim 27; does Sadowsky make up for the deficiency in Carr?

ISSUE 2

In the context of independent claim 33 and the claims dependent on claim 33; does the combination of Carr and Sadowsky suggest a method wherein reconstituted skim milk and concentrated milk fat are mixed and homogenized to produce cream?

FACTUAL FINDINGS

FF 7. The Examiner relies on Carr as discussed above (FF 1-6; Ans. 4).

FF 8. The Examiner also finds that "Carr teaches the use of the prepared milk protein concentrate in the preparation of food products wherein protein and concentrated fat (i.e. cream) are added to the . . . milk protein concentrate to first produce a fat containing liquid (see Example 9), prior to preparing cheese" (Ans. 7).

FF 9. Carr's Example 9 teaches a milk solution comprising 5.36% fat (Carr 12: ll. 17-18).

FF 10. The Examiner finds that Carr differs from the claimed invention by failing to suggest "specific cheese making steps" (Ans. 4).

FF 11. The Examiner relies on Sadowsky to "teach conventional cheese making steps" that include, inter alia, combining reconstituted skim milk with concentrated milk fat and then homogenizing the mixture (id.).

FF 12. Sadowsky teaches the separation of the cream component of whole milk to produce a reduced-fat or skim milk containing about 0.05 to about 2 percent fat (Sadowsky, col. 5, ll. 24-27; see also Sadowsky, Fig. 1).

FF 13. Sadowsky teaches that the "cream (preferably containing greater than about 16 percent fat, and more preferably about 40 to about 45 percent fat) can be sold as is or used in other products" (Sadowsky, col. 5, ll. 27-30).

FF 14. Sadowsky teaches that the reduced-fat or skim milk is mixed with about 4 to about 10 percent milkfat to form a slurry, which is then homogenized to obtain a concentrated milkfat/milk blend (Sadowsky, col. 5, ll. 30-34 and 47-48).

FF 15. Sadowsky teaches that the "resulting milkfat/milk blend may be used for the production of natural cheese using conventional procedures" (Sadowsky, col. 5, ll. 66-67).

FF 16. Sadowsky teaches that "[a]n important step in producing natural cheeses is to provide a milk/milkfat blend with a desired fat level. . . . Concentrated milkfat must be thoroughly mixed with milk and/or cream at proper ratios to prevent the occurrence of defects in the final cheese product" (Sadowsky, col. 1, ll. 34-40).

FF 17. Appellant's Specification discloses an embodiment that produces a "cream comprising about 18% to about 35% fat" and other embodiments directed to a heavy cream, a high fat cream and a plastic cream that comprise a fat percentage that is higher than a "cream."

ANALYSIS

Claim 27:

Claim 27 depends from claim 38. As discussed above, claim 38 requires, inter alia, that an ionic composition of a hydrated protein solution be adjusted "to enhance its ability to emulsify fat in water as measured by at least one of increased emulsion capacity (EC) and increased emulsion stability (ES) in comparison to untreated protein" (Claim 38). As further discussed above, Carr fails to teach "increased emulsion capacity and stability" (FF 5) and the preponderance of evidence on this record fails to show that an increase in the emulsion capacity and stability of a milk protein concentrate would be an inherent or obvious property of Carr's milk protein concentrate. While the Examiner relies on Sadowsky to suggest conventional cheese making products (FF 11), the Examiner fails to identify a disclosure in Sadowsky that makes up for the foregoing deficiency in Carr.

Claims 33-37, and 43-45:

Appellant's claim 33 requires, inter alia, a cream to be produced by homogenizing a mixture of reconstituted skim milk and concentrated milk fat (Claim 38). The Examiner does not dispute Appellant's contention that the word "cream" is defined in the art as comprising not less than 18% milkfat and that the combination of Carr and Sadowsky fails to suggest a product that meets the fat requirements of a "cream" (App. Br. 15; see also 21 C.F.R. § 131; FF 16). In this regard, we note that Carr suggests a solution for making cheese that comprises 5.36% fat (FF 9) and Sadowsky suggests a slurry that, at best, comprises 12% milk fat (2% fat from the reduced-fat or skim milk itself + 10% added milkfat), which is homogenized

to obtain a concentrated milkfat/milk blend (FF 12 and 14). We also note that the combination of Carr and Sadowsky suggests the use of terms such as solution, slurry, and blend in reference to a composition comprising up to about 12% milkfat and the term cream in reference to a composition that "preferably contain[s] greater than about 16 percent fat, and more preferably about 40 to about 45 percent fat" (Cf. FF 9, 13, and 14).

Nevertheless, apparently recognizing that the combination of Carr and Sadowsky fails to suggest the production of a cream by homogenizing a composition comprising a reconstituted skim milk and milk fat the Examiner asserts that "[t]he adjustment of fat content is well-within the skill of the art. If a low fat product is desired the fat content may be decreased and if the higher fat product is desired the fat content of the starting materials may be increased" (Ans. 7). We are not persuaded.

Notwithstanding the Examiner's unsupported assertion to the contrary, Sadowsky teaches that "[a]n important step in producing natural cheeses is to provide a milk/milkfat blend with a desired fat level. . . . Concentrated milkfat must be thoroughly mixed with milk and/or cream at proper ratios to prevent the occurrence of defects in the final cheese product" (FF 16). Sadowsky also teaches that a fat level of 4-10% in a milkfat/milk blend is appropriate for making cheese (FF 15).

In this regard, Appellant contends that

> Carr and Sadowsky disclose making products with specific fat contents. There is no reason or benefit in Carr or Sadowsky to produce a higher fat product. The Examiner has . . . only provided a conclusory reason to increase the fat content . . . [and] a person of skill in the art would appreciate that you cannot always decrease or increase the amount of fat in a particular product to any amount, as the fat content depends on

> the desired properties of the particular product. Thus, a person of skill in the art, especially without any reason or benefit to do so, would not modify the process of Carr or Sadowsky as proposed by the Examiner to achieve a product with a higher fat level.

(Reply Br. 8-9.) We agree. We also agree with Appellant's contention that the modification proposed by the Examiner "requires increasing the amount of fat in Carr or Sadowsky without any benefit, reason, or guidance of how to do so" (Reply Br. 9).

CONCLUSION OF LAW

In the context of claim 27; Sadowsky fails to make up for the deficiency in Carr. In the context of independent claim 33 and the claims dependent on claim 33; the combination of Carr and Sadowsky fails to suggest a method wherein a mixture of reconstituted skim milk and concentrated milk fat is homogenized to produce cream. The rejection of claims 27, 33-37, and 43-45 under 35 U.S.C § 103(a) as unpatentable over the combination of Carr and Sadowsky is reversed.

REVERSED

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EG
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cdc